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CONFIDENTIALSeeds and Oils

1. Rape

Rape is grown extensively as a winter crop south of the Yangtze River for its seeds and oil.

2. Sesame Oil

Sesame oil is grown chiefly in the Yellow River basin. In 1935, 1,171,000 shih-tan [one shih tan equals 50 kilograms] of sesame seed was exported and in 1936 the amount was 1,063,000 quintals.

3. Tea Oil

In 1936, China exported 37,905 quintals of tea oil.

4. Cotton seed

In 1936, China exported 700,000 quintals of cottonseed and 122,000 quintals of cottonseed oil.

Rubber

Overseas Chinese returned from the South Seas, and familiar with rubber culture, have demonstrated in recent years that rubber trees grown in Hainan can produce a latex in no way inferior to the imported product. Yunnan also offers prospects for the culture of some types of latex-bearing plants. If attention is paid to rubber culture in China, it may be possible eventually to provide for a fair proportion of the country's rubber needs domestically. [No production figures were given.]

Salt

In Szechwan 60,000 salt wells have an annual output of over 4 million piculs. The province, together with Yunnan, also produces rock salt.

Pond salt, produced principally in the arid areas of Inner Mongolia, Shansi, Suiyuan, and Ning-shan, represents about one third of annual national production. The largest source of salt in China is the sea. All seven coastal provinces have more or less extensive salt fields.

The annual production of all types of salt runs at 54 million shih-tan. The salt tax in 1936 amounted to one fourth of the central government's revenue.

Rice

The annual rice production in China amounts to over one billion shih-tan [one shih-tan equals 110.23 pounds]. About two thirds of this amount is produced in the warm moist plains and river valleys of Central, East, West, and South China. Ordinarily Szechwan produces more rice than any other province, because of its large acreage. Occasionally, because of multiple cropping, Kwangtung yields surpass those of Szechwan.

Two thirds of China's population depend on rice for their living. In the past there has been a shortage of rice so that imports have reached as much as 13 million quintals. In 1937, rice imports amounted to 3,460,000 quintals, putting it in fifth place in value among the year's imports.

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Wheat

The annual wheat production in China amounts to 400 million shih-tan. Two thirds of this is raised on the plains of North China. Approximately 21 percent of the cultivated area of the country is under wheat. In 1931, China imported 180 million yuan's worth of wheat and flour, chiefly from Australasia and Argentina.

Soybeans

In 1947, some 3,500,000 hectares were planted in soybeans in Northeast China, or about 30 percent of the cultivated land in the area. The yield constituted about 25 percent of the total agricultural production in the Northeast. The highest annual production has been 5,800,000 tons. In 1921, the production of soybeans in the Northeast was 70 percent of total world production. Soybeans constitute the most important export of the Northeast followed by bean oil and beancake.

Cotton

Cotton production in China 1947 is between 7 and 8 million piculs. The area under cotton is about 1/60 of the total cultivated area of the country.

II. MINERAL RESOURCES

Coal

The percentage distribution of coal reserves by provinces in China is as follows:

<u>Province</u>	<u>Percentage</u>
Shansi	53.64
Shensi	30.34
Honan	3.19
Sinkiang	2.53
Hopeh	1.7
Szechwan	1.19
Northeast	2.00

Other provinces each have less than one percent of the total reserves. The total reserves amount to 237 billion tons. Unfortunately, transport of coal from Shansi, which has the greatest reserves, to the industrial areas along the coast is difficult and expensive.

Iron

Iron ore reserves in China are distributed as follows:

<u>Province</u>	<u>Amount (tons)</u>
Hupei	143,000,000
Chahar	90,000,000
Fukien	57,000,000
Hopeh	40,000,000
Sikang	31,000,000
Suiyuan	30,000,000

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<u>Province</u>	<u>Amount (tons)</u>
Kweichow	29,000,000
Hunan	27,000,000
Szechwan	23,000,000
Anhui	20,000,000

Reserves in other provinces run under 2,000 tons each. The national total is approximately 1,500,000,000 tons.

Petroleum

The potential petroleum bearing area is considered as extending from northern Sinkiang through Kansu and Shensi into Szechwan. According to the Geological Survey Office of the Nationalist government, underground reserves are estimated at 1,375,000,000 barrels of 42 gallons each. This estimate is principally for Shensi and Szechwan. Shale rock petroleum resources are estimated at 4,377,000,000 barrels.

Total petroleum imports to China in 1936 amounted to 7,700,000 yuan (national currency). The chief source was Indonesia with the US second.

The best prospect for petroleum exploitation in China seems to be in K'u-ch'e, Ti-hua, Wu-su, Sui-lai and Ta-ch'eng hsiens in the Tarim Basin of Sinkiang, north of the Yarkand Darya. In numerous places here oil appears on the surface of water wells. The geological formation is identical with that in the Caucasus region in the Soviet Union.

Copper

Copper reserves are found in some ten provinces of China. Present exploitation of these resources is being carried on only on a small scale in Yunan, Szechwan, Kweichow, Liaoning, and Kirin provinces. The highest annual production, in the early years of the republic, has never been more than 800-900 tons. Imports have varied from 10,000 tons, to several tens of thousands of tons annually, used chiefly in the electrical goods industry. China seems to be a have-not country in the matter of copper resources.

Gold

Gold is found in all provinces of China. The highest production before the war was about 100,000 ounces. In 1940, mine production and purchase of old gold combined amounted to 300,000 ounces.

Mountain gold mining is carried on chiefly in western Hunan, in Shantung, Hopeh, Sinkiang, Sikang, and Jehol. The annual production is as follows:

<u>Area</u>	<u>Amount (ounces)</u>
Hunan	50,000
Shantung	6,000
Hopeh	10,000

No gold is being mined in Sinkiang, Sikang, and Jehol provinces at present.

Alluvial gold is found in varying amounts in practically every province of China. The most valuable sources of this type of gold are in Kirin and Heilungkiang. In the latter half of 1935, during the Japanese occupation, the

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production of alluvial gold in these provinces reportedly amounted to 100,000 ounces. There is sporadic production in Jehol, Honan, Shantung, Hupeh, Fukien, and Kiangsi. In Szechwan, Hunan, Kwangsi, Sikang, Kansu, Sinkiang, and Tsinghai the annual production of alluvial gold runs from 2,000 to 20,000 ounces.

Manganese

The chief sources of manganese in China are in Kiangsi, Hunan, Kwangsi and Kwangtung. Ordinarily some 50,000 tons a year are mined and exported. China, as yet [1947] unable to produce manganese steel, is obliged to export her total manganese production and to import the finished product. Reserves are large and easily worked.

Tin

Tin in China is found in areas of Yunnan, Hunan, Kwangtung, and Kwangsi. Ninety percent of production is in Yunnan, amounting to from 7,000 to 8,000 tons per year.

Antimony and Tungsten

The chief sources of antimony are Hunan, Yunnan, Kweichow, and Kwangsi. China produces 80 percent of the world's antimony, 90 percent of which is from Hunan. Two thirds of China's antimony exports go to the US.

Tungsten is scattered over Kwangtung, Kwangsi, Yunnan, Kiangsi, Hunan, and Hopeh. Southern Kiangsi and Hunan and Kwangtung are the chief producing areas. Chinese reserves are about 40 percent of the world's total. In 1938, China exported 30,000 metric tons of tungsten.

Zinc

Zinc production is confined to Hunan and Szechwan. Recent annual production has been about 20,000 tons of which most is exported.

Lead

Lead production in China amounts to only 10,000 tons a year, chiefly from Hunan and Szechwan.

Aluminum

Hitherto aluminum production has been negligible. Recently, an ore yielding 59 percent aluminum oxide has been discovered in the Po-shan area of Shantung. Indications are that some 6,800,000 tons of aluminum reserves are included in this deposit. Investigators estimate there are some 40 million tons of bauxite reserves in Kweichow, and Japanese mineralogists estimated reserves of 110 million tons in two deposits in Liaotung Province.

Silver

Although China is the second largest user of silver in the world, production is slight. The China source of silver production in China is Jehol Province with lesser production in the Southwest.

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Saltpetre

Saltpetre in various combinations is found throughout China. It is largely used in tanning leather, making gunpowder, and more recently to some extent in the manufacture of fertilizer. Before the war against the Japanese the annual imports amounted to some 3,000 tons. A very good grade of carbonate of soda is produced in Kansu and Ningsia.

Phosphorus

Phosphorus production in China is confined to Kiangsu, Kwangtung, and Yunnan. Recently discovered reserves in Yunnan are estimated at from 20 to 50 million tons. There is a 200,000-ton phosphorus deposit in the form of guano on the Paracel Islands.

Alum

What is regarded as the world's largest single alum deposit is located in P'ing-yang Hsien, Chekiang. It is estimated at one billion tons.

Mica

Mica is found in Sikang, Suiyuan, Hopeh, Honan, and Yunnan.

Fluorspar

The chief deposit of fluorspar in China is in Chekiang, estimated at not less than 2 million tons. Annual production from this deposit before 1931 was 10,000 tons. Fluorspar is also found in Hunan, Shantung, Liaoning, Kirin, Heilungkiang, Shansi, Szechwan, and Kweichow. Before the anti-Japanese war the chief exports were to Japan.

Gypsum

The chief source of gypsum in China is Hupeh with 50,000 to 60,000 tons annual production. Gypsum is also found in Kansu, Tsinghai, Ningsia, Sinkiang, Shensi, Honan, Kiangsi, Szechwan, Kweichow, Yunnan, Kwangtung, Kwangsi, Kiangsu, and Anhwei. National production previous to the anti-Japanese war was 60,000 to 70,000 tons. National consumption at that time was 100,000 tons, requiring the annual importation of some 40,000 tons.

Limestone

Limestone deposits are widespread in China affording unlimited raw material for production of cement.

Magnesium

Chief deposits of magnesium so far found in China are in the Hai-ch'eng area of Liaotung Province in a strip 35 kilometers long and ranging to 700 feet in depth. In 1933, production under Japanese auspices was 71,376 tons.

Platinum

There is no definite source of platinum clearly known in China. Traces have been found in processing alluvial gold in Han-yin Hsien, Shensi.

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Mercury

Mercury in China is found chiefly in the Szechwan-Hunan-Kweichow border area. The combined production of Hunan and Kweichow in 1930 was valued at 20 million yuan (national currency).

Molybdenum

Molybdenum is found in various parts of China but there are no substantial deposits in any one area. Formerly, a few tons a year were produced, but at present 1947 production is negligible.

Miscellaneous

Vanadium, chromium, and nickel have not yet 1947 been developed in significant quantities.

Sulfur and graphite are found in some quantities but have not yet been developed to self-sufficiency. Potassium oxide is another item important to industrial development that so far has not been produced in China 1947.

III. SELF-SUFFICIENCY IN NATURAL RESOURCES

Vital resources in which China can hope to achieve surpluses above domestic needs are silk, soybeans, rapeseed, coal, tungsten, tin, antimony, and salt. Items in which China may achieve self-sufficiency include:

Rice	Mules	Aluminum
Wheat	Wool	Mercury
Cotton	Leather	Sulfur
Hemp	Timber	Saltpetre
Sugar	Petroleum	Potassium
Cattle	Manganese	Phosphorus
Sheep	Molybdenum	Mica
Hogs	Fire-resistant materials	Fluorspar
Horses	Magnesium	

Of the 44 types of resources essential to the industrial development, China will be dependent upon neighboring and friendly countries for only eight.

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